

REMARKS/ARGUMENTS

Claims 1, 4-6, 8-20, and 36-46 are pending. Claim 1 has been amended. New claims 37-46 have been added. No new matter has been introduced thereby.

The Examiner has rejected claims 1, 4, 8-20 and 36 under 35 U.S.C. 103(a) as unpatentable over Wood et. al. (U.S. Publication No. US 2005/0064681) in view of Rottstegge (U.S. Patent No. 6,946,236). The Examiner has further rejected claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over Wood and Rottstegge as applied to claims 1, 4, 8-20 and 36 above, and further in view of Azami et al. (U.S. Patent No. 6,911,358). The Applicants request reconsideration of the rejections in light of the following amendments and remarks.

Rejections Under 35 U.S.C. § 103 (a)

Claims 1, 4, 8-20 and 36

The Examiner has rejected claims 1, 4, 8-20 and 36 under 35 U.S.C. 103(a) as being anticipated by Wood and in view of Rottstegge. In the Office Action mailed on May 22, 2006, the Examiner indicated that the features upon which the applicant relied (i.e., covers an entire substrate, layer supports an adhesive layer) in the amendment of February 7, 2005 were not recited in the rejected claim(s). Accordingly, the Applicants have amended Claim 1 to include the referenced features. No new matter has been introduced thereby.

Claim 1 as amended recites, “an adhesive layer including a first surface region configured to adhere to the semiconductor wafer, the adhesive layer including a second surface region opposite to the first surface region, the adhesive layer comprising a high molecular weight polymer, wherein the polymer is soluble in one of the group consisting of: a mildly alkaline solution and a mildly acidic solution...” In the Office Action, the Examiner alleged that Wood et. al. also disclosed high molecular polymers such as thermosetting polymers and photoresist. However, Wood disclosed the polymer as part of the support layer, not part of the adhesive layer, (see Wood page 7 paragraph 94-95). The Examiner has also correctly stated that Wood did not disclose a polymer that is soluble in either a mildly alkaline or mildly acidic solution. In the

Office Action, the Examiner stated that Wood et al disclosed a photopolymer to adhere the pieces of the support ring. It is clear that Wood did not show or suggest a high molecular weight polymer that includes a surface adhered to the semiconductor wafer.

Further, as the Examiner also noted, Wood disclosed a support structure in a ring configuration that is configured to receive a substrate (see FIGS. 2A-4D; ¶ 0041; ¶ 0059; ring structure 40, 40', 40a', 40b', 40c' and 40d'). In contrast, amended claim 1 requires, "a support layer coupled to the second surface region of the adhesive layer, the support layer being configured to support the adhesive layer and the entire semiconductor wafer during processing." As illustrated in FIG. 1 of the drawings of the present application, support layer 110 is not a ring structure, but a layer that necessarily covers an entire substrate such that the layer supports an adhesive layer to which a substrate may be attached.

Therefore, for at least these reasons, the reference prior art, alone or in combination, do not show or suggest the combination of elements in the manner claimed. Applicants respectfully submit that claim 1 as amended is allowable.

Claims 4, 8-20 and 36 depend either directly or indirectly from claim 1 and are therefore allowable over the cited art for at least the same reasons as stated for claim 1. In addition, the reference prior art, alone or in combination, do not show or suggest the combination of elements in the manner claimed in claims 4, 8-20 and 36. For example, claim 10 recites, "thickness of the protective disk is approximately 600 μ m." Claim 11 recites, "the adhesive layer has sufficient thickness to conform to topographical features of the semiconductor wafer." Claim 13 recites, "an intermediate layer located between the adhesive layer and the support layer configured to provide additional properties to the protective disk." Claim 14 recites, "the intermediate layer is configured to provide at least one of the group consisting of ability to conform to topographical features of the semiconductor wafer; and enhanced strength of the protective disk." Applicants submit that the cited references, alone or in combination, did not show or suggest the combination of elements recited in these claims. Therefore claims 4, 8-20 and 36 are allowable.

Rejections Under 35 U.S.C. § 103 (a)

Claims 5-6

The Examiner has rejected claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over Wood and Rottstegg as applied to claims 1, 4, 8-20 and 36 above, and further in view of Azami et al. (U.S. Patent No. 6,911,358). Applicants respectfully submit that claims 5-6 depend either directly or indirectly from claim 1 and are therefore allowable over the cited art for at least the same reasons as stated for claim 1.

New Claims 37-44

Applicants submit that newly presented claims 37-44 introduce no new subject matter. Support for the claim may be found in the specification and the drawings. Applicants submit that the cited references, alone or in combination, did not show or suggest the combination of elements in claims 37-44. Therefore claims 37-44 are allowable.

New Claims 45-46

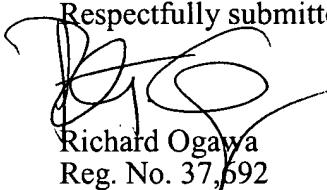
Applicants submit that newly presented claims 45 and 46 introduce no new subject matter. Support for the claim may be found in the specification and the drawings. For example, as shown in Figure 1 and Figures 2A-2B, protective disk 100 includes a substantially circular plate 110 comprising a continuous member extending the entirety of a surface of the semiconductor wafer. Applicants submit that the cited references, alone or in combination, did not show or suggest the combination of elements in claims 45 and 46. Therefore claims 45 and 46 are allowable.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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